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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Ilan LEVIN, et al.

Application No.: 10/009,069

Group No.: 1632

Filed: December 7, 2001

Examiner: -

For: A MOLECULAR MARKER BASED ON THE FrK2 (FRUKTOKINASE 2) GENE

Attorney Docket No.: U 013763-7

Assistant Commissioner of Patents  
Washington, D.C. 20231

CERTIFICATE OF MAILING UNDER 37 C.F.R. 1.8(a)

I hereby certify that the attached correspondence comprising:

INFORMATION DISCLOSURE STATEMENT  
PTO FORM 1449 (FOUR SHEETS) (4)  
TWENTY NINE REFERENCES (29)  
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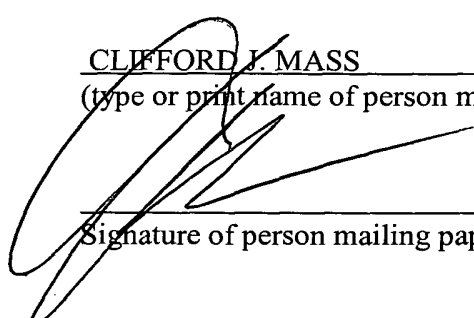
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Ilan LEVIN, et al.

Serial No.: 10/009,069

Filed: December 7, 2001

For: A MOLECULAR MARKER BASED ON  
THE Frk2 (FRUKTOKINASE 2) GENE



) Art Unit: (N/A) 1632

) Examiner: (N/A)

) Washington, D.C.

) August 8, 2002

) Docket No.: U 013763-7

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#11/IDS  
11/25/02

INFORMATION DISCLOSURE STATEMENT [IDS]

Honorable Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Sir:

This Information Disclosure Statement is submitted in accordance with 37 C.F.R. 1.97, 1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

[X] 1. This IDS should be considered, in accordance with 37 C.F.R. 1.97, as it is filed:

(Check one of the boxes A-D)

☐ A. within three months of the filing date of the above-identified national application or within three months of the entry into the national stage of the above-identified international application.

[X] B. before the mailing date of a first office action on the merits.

☐ C. after (A) and (B) above, but before final rejection or allowance, and Applicants have made the necessary certification (box "i" below) or paid the necessary fee (box "ii" below).

(check one of the boxes "i" and "ii" below:)

☐ i. Counsel certifies that, upon information and belief, each item of information listed herein was either (a) cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS; or (b) was not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of undersigned after making reasonable inquiry, was not known to any individual designated in 1.56(c) more than three months prior to the filing of this IDS.

☐ ii. A check for the fee set forth in 1.17(p), presently believed to be \$240, is enclosed (check no. \_\_\_\_\_).

☐ D. after (A), (B) and (C) above, but before payment of the issue fee: Applicant petitions under 37 C.F.R. 1.97(d) for the consideration of this IDS. A check for the fee set forth in §1.17(i), presently believed to be \$130 is enclosed (check no. \_\_\_\_\_). Counsel certifies that, upon information and belief, each item of information listed herein was either (i) cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the IDS; or (ii) was not cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, was not known to any individual designated in 1.56(c) more than three months prior to the filing of this IDS.

☒ 2. In accordance with 37 C.F.R. 1.98, this IDS includes a list (e.g., form PTO-1449) of all patents, publications, or other information submitted for consideration by the office, either incorporated into this IDS or as an attachment hereto. A copy of each document listed is attached, except as explained below.

(check boxes A and/or B and fill in blanks, if appropriate.)

☐ A. Document(s) \_\_\_\_\_ is (are) deemed substantially cumulative to document(s) \_\_\_\_\_, and, in accordance with 1.98(c), only a copy of each of the latter documents is enclosed.

☐ B. Certain documents were previously cited by or submitted to the Office in the following prior application(s), which are relied upon under 35 U.S.C. 120:

[insert serial numbers and filing dates of prior applications]

Applicant identifies these documents by attaching hereto copies of the forms PTO-892 and PTO-1449 from the files of the prior application(s) or a fresh PTO-1449 listing these documents, and request that they be considered and made of record in accordance with 1.98(d). Per 37 CFR 1.98(d), copies of these documents need not be filed in this application.

☐ 3. Document(s) \_\_\_\_\_ is(are) not in the English language. In accordance with 1.98(c), Applicant states:

☐ An English translation of each document (or of the pertinent portions thereof), or a copy of each corresponding English-language patent or application, or English-language abstract (or claim) is enclosed.

☐ A concise explanation of the relevance of document(s) \_\_\_\_\_ is found in the attached search report (see reply to Comment 68 in the preamble to the final rules; 1135 OG 13 at 20).

☐ A concise explanation of the relevance of document(s) \_\_\_\_\_ is set forth as follows:  
[Insert concise explanation of relevance]

☐ A concise explanation of the relevance of document(s) \_\_\_\_\_ can be found on page(s) \_\_\_\_\_ of the specification.

☐ A concise explanation of document(s) \_\_\_\_\_ can be found on the attached sheet.

4. No explanation of relevance is necessary for documents in the English language (see reply to Comments 67 and 68 in the preamble to the final rules; 1135 OG 13 at 20).

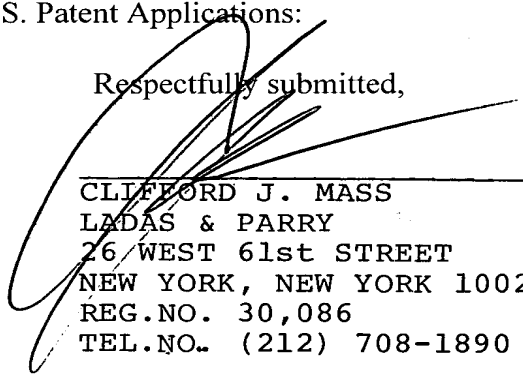
☐ 5. Other information being provided for the examiner's consideration follows:

6. In accordance with 37 C.F.R. 1.97(g) and (h), the filing of this IDS should not be construed as a representation that a search has been made or that information cited is, or is considered to be, material to patentability as defined in §1.56 (b), or that any cited document listed or attached is (or constitutes) prior art. Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item and Applicant reserves the right to prove that the date of publication is in fact different.

**CROSS REFERENCE UNDER 37 C.F.R. §1.78 TO RELATED APPLICATIONS**

Pursuant to 37 C.F.R. § 1.78, Applicant notes that the above-identified patent application may be related to the following U.S. Patent Applications:

Respectfully submitted,



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|  |                                 |                              |
|--|---------------------------------|------------------------------|
| FORM PTO-1449 (Colb)   | ATTY DOCKET NO.<br>U 013763-7   | SERIAL NUMBER<br>10/009,069  |
| LIST OF PATENTS AND<br>PUBLICATIONS FOR APPLICANTS'<br>INFORMATION STATEMENT | APPLICANT<br>Ilan LEVIN, et al. | EXAMINER<br>(N/A)            |
|  | FILING DATE<br>December 7, 2001 | GROUP ART UNIT<br>(N/A) 1632 |



## U.S. PATENT DOCUMENTS

| Examiner's<br>Initials |    | DOCUMENT NO. | DATE      | NAME            | CLASS | SUB | FILING<br>DATE |
|------------------------|----|--------------|-----------|-----------------|-------|-----|----------------|
|                        | AA | 5,434,344    | July 1995 | Bennett, et al. | 800   | 200 |                |
|                        | AB | 5,750,869    | May 1998  | Shewmaker       | 800   | 205 |                |

## FOREIGN PATENT DOCUMENTS

|  |    | DOCUMENT NO. | DATE      | COUNTRY | CLASS | SUB | TRANS-<br>LATION |
|--|----|--------------|-----------|---------|-------|-----|------------------|
|  | AC | WO 99/04621  | Feb. 1999 | PCT     |       |     |                  |

## OTHER ART (Including Author, Bills, Pertinent Pages, Etc.)

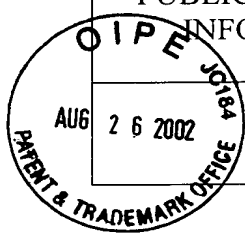
|  |    |   |
|--|----|---|
|  | AD | Folkertsma R.T., et al., Construction of a bacterial artificial chromosome (BAC) library of <i>Lycopersicon esculentum</i> cv. Stevens and its application to physically map the sw-5 locus. <i>Molecular Breeding</i> 5:197-207, 1999. |
|  | AE | Konieczny A., et al., A procedure for mapping arabidopsis mutations using co-dominant ecotype-specific PCR-based markers. <i>Plant J.</i> 4:403-410, 1993.  |
|  | AF | Jarvis P., et al., Integration of CAPS markers into the RFLP map generated using recombinant inbred lines of <i>Arabidopsis thaliana</i> . <i>Plant Mol. Biol.</i> 24:685-687, 1994.  |
|  | AG | Kanayama, Y., et al., Divergent fruktokinase genes are differentially expressed in tomato. <i>Plant Physiology</i> 113: 1379-1384, 1997.  |
|  | AH | Levin I., et al., Fgr a major locus that modulated fructose to glucose ratio in mature tomato fruit. <i>Theor. Appl. Genet.</i> , in press, 1999.   |
|  | AI | Stevens, M.A., 1986, "Inheritance of Tomato Fruit Quality Components", <i>Plant Breeding Reviews</i> , 4:274-310.   |
|  | AJ | Davies, J.N. et al., 1981, "The Constituents of Tomato Fruit—the Influence of Environment, Nutrition, and Genotype", <i>CRC Critical Review Food Science and Nutrition</i> , 15:205-280.  |
|  | AK | Miron, D. et al., 1991, "SPS, SS and Invertase Activities in Developing Fruit of <i>Lycopersicon esculentum</i> and the Sucrose Accumulating <i>L. hirsutum</i> ", <i>Plant Physiol.</i> 95:623-627.                                    |

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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|------------------------|----|--------------|-----------|----------|-------|-----|----------------|
|                        | AA | 5,817,913    | Oct. 1998 | Schaffer | 800   | 200 |                |
|                        | AB |              |           |          |       |     |                |

## FOREIGN PATENT DOCUMENTS

|  |    | DOCUMENT NO. | DATE      | COUNTRY | CLASS | SUB | TRANS-<br>LATION |
|--|----|--------------|-----------|---------|-------|-----|------------------|
|  | AC | EP 0534858   | Mar. 1993 | Europe  |       |     |                  |

## OTHER ART (Including Author, Bills, Pertinent Pages, Etc.)

|   |    |  |
|---|----|--|
| j | AD | Davies, J.N., "On the Occurrence of Sucrose in Lycopersicon Fruit and its Nature", <i>Nature</i> , vol. 266, 586-587, 1966.  |
|   | AE | Tanksley, S.D. et al., 1992, "High Density Molecular Linkage Maps of the Tomato and Potato Genomes", <i>Genetics</i> , 132:1141-1160.  |
|   | AF | Williamson, V.W. ET al., 1994, "A PCR-Based Marker Tightly Linked to the Nematode Resistance Gene, Mi, in Tomato", <i>Theor. Appl. Genet.</i> , 87:757-763.                            |
|   | AG | Chagu'e, V. et al., 1996, "Identification and Mapping on Chromosome 9 of RAPD Markers Linked to Sw-5 in Tomato by Bulk Segregant Analysis", <i>Theor. Appl. Genet.</i> , 92:1045-1051. |
|   | AH | Helentjaris, T. et al., 1986, "Construction of Genetic Linkage Maps in Maize and Tomato Using Restriction Fragment Length Polymorphisms", <i>Theor. Appl. Genet.</i> , 72:761-769.     |
|   | AI | Tanksley, S.D. et al., 1995, "Chromosome Landing: A Paradigm for Map-Based Cloning in Plants with Large Genomes", <i>Trends Genet.</i> , 11:63-68.                                     |
|   | AJ | Saiki, R.K. et al., "1985, "Enzymatic Amplification of B-globin Sequences and Restriction Site Analysis for the Diagnosis of Sickle Cell Anemia", <i>Science</i> , 230:1350-1354.      |
|   | AK | Hillel, J. et al., 1990, "Genomic Selection: Application of DNA Fingerprints for Efficient Gene Introgression", <i>Genetics</i> , 124:783-789.   |

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|                        | AA |              |      |      |       |     |                |
|                        | AB |              |      |      |       |     |                |

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|--|----|--------------|------|---------|-------|-----|------------------|
|  | AC |              |      |         |       |     |                  |

## OTHER ART (Including Author, Bills, Pertinent Pages, Etc.)

|    |  |
|----|--|
| AD | Williams, J.G.K. et al., 1990, "DNA Polymorphisms Amplified by Arbitrary Primers are Useful as Genetic Markers", <i>Nucl. Acids Res.</i> , 18:6531-6535.                                     |
| AE | Tautz, D., 1989, "Hypervariability of Simple Sequences as a General Source for Polymorphic DNA Markers", <i>Nucl. Acids Res.</i> , 17:6463-6471.   |
| AF | Gupata, M. et al., 1994, "Amplification of DNA Markers from Evolutionarily diverse (sic) Genomes Using Single Primers of Simple-Sequence Repeats", <i>Theor. Appl. Genet.</i> , 89:998-1006. |
| AG | Fulton, T.W. et al., 1995, "Microprep. Protocol for Extraction of DNA from Tomato and Other Herbaceous Plants", <i>Plant Molecular Biology Reporter</i> , 13:207-209.                        |
| AH | Information on: Automated Thermocycler (MJ Research, Inc., Watertown, Mass. USA).  |
| AI | Information on GeneClean II kit (BIO 101, Vista, CA, USA).   |
| AJ | Information on P-GEM Easy Vector Cloning System (Promega Corp., Madison, WI, USA).   |
| AK | Davies, J.N. et al., "Changes in the Individual Sugars of Tomato Fruit During Ripening", <i>J. Sci. Fd. Agric.</i> , vol. 26, pp. 1103-1110.   |

EXAMINER:

DATE CONSIDERED:

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FORM PTO-1449

U. S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO.

SERIAL NO.

U 013763-7

10/009,069

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

APPLICANT

Ilan LEVIN, t al.

(Use several sheets if necessary)

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GROUP

December 7, 2001

1632



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## REFERENCE DESIGNATION

## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL | DOCUMENT<br>NUMBER | DATE | NAME | CLASS | SUB-<br>CLASS | FILING DATE<br>IF<br>APPROPRIATE |
|---------------------|--------------------|------|------|-------|---------------|----------------------------------|
| AA                  |                    |      |      |       |               |                                  |
| AB                  |                    |      |      |       |               |                                  |
| AC                  |                    |      |      |       |               |                                  |
| AD                  |                    |      |      |       |               |                                  |
| AE                  |                    |      |      |       |               |                                  |
| AF                  |                    |      |      |       |               |                                  |
| AG                  |                    |      |      |       |               |                                  |
| AH                  |                    |      |      |       |               |                                  |
| AI                  |                    |      |      |       |               |                                  |
| AJ                  |                    |      |      |       |               |                                  |
| AK                  |                    |      |      |       |               |                                  |

## FOREIGN PATENT DOCUMENTS

|    | DOCUMENT<br>NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |    |
|----|--------------------|------|---------|-------|---------------|-------------|----|
|    |                    |      |         |       |               | YES         | NO |
| AL |                    |      |         |       |               |             |    |
| AM |                    |      |         |       |               |             |    |
| AN |                    |      |         |       |               |             |    |
| AO |                    |      |         |       |               |             |    |
| AP |                    |      |         |       |               |             |    |

## OTHER ART (Including Author, Title, Date, Pertinent Dates, Etc.)

|    |   |
|----|---|
| AR | Davis, J.N., Occurrence of Sucrose in the Fruit of Some Species of Lycopersicon, <i>Nature</i> , Vol. 209, p. 640-641, (1966) |
| AS |   |
| AT |   |

EXAMINER

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